

U.S. Patent Application No. 10/810,572
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AMENDMENT TO THE CLAIMS

A complete listing of the claims is as follows:

Claim 1. (Previously Presented) A hollow surfboard comprising:

a lower half-shell having no lateral side-walls;
an upper half-shell comprising a sheet of foam having downwardly curved side-walls, said upper half-shell being adapted to support a standing person during use of the surfboard;
at least one longitudinal partition, at least said one longitudinal partition vertically connecting said lower and upper half-shells;
said longitudinal partition consisting essentially of foam.

Claim 2. (Previously Presented) A hollow surfboard according to claim 1, wherein:

said at least one longitudinal partition comprises a plurality of longitudinal partitions made of foam, said foam being exposed to an inner cavity of the board.

Claim 3. (Previously Presented) A hollow surfboard according to claim 1, wherein:

said at least one longitudinal partition is made of an elastic foam, said elastic foam, providing said upper half-shell with an ability to deflect relative to said lower half-shell under pressure exerted by a foot of the user, said elastic foam being exposed to an inner cavity of the board.

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Claim 4. (Previously Presented) A hollow surfboard according to claim 2, wherein:

said plurality of longitudinal partitions are made of an elastic foam providing said upper half-shell with an ability to deflect relative to said lower half-shell under pressure exerted by a foot of the user.

Claim 5. (Currently Amended) A hollow surfboard according to claim 1, wherein:

said sheet of foam of said upper half-shell is a thermoformed foam sheet that
has been thermoformed to form said downwardly curved side-walls.

Claim 6. (Previously Presented) A hollow surfboard according to claim 1, wherein:

said lower half shell has not been thermoformed.

Claim 7. (Previously Presented) A hollow surfboard according to claim 1, wherein:

said upper half-shell and said lower half-shell are assembled by gluing a lower edge of said lateral sidewalls of said upper half-shell against an upper surface of said lower half-shell.

Claim 8. (Previously Presented) A hollow surfboard according to claim 1, wherein:

said foam sheet of said upper half-shell is laminated on opposite sides with at least one layer of resin-impregnated fibers.

Claim 9. (Previously Presented) A hollow surfboard according to claim 1, wherein:

said at least one partition is made of polypropylene foam.

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Claim 10. (*Previously Presented*) A hollow surfboard according to claim 9, wherein:
said polypropylene foam comprises an expanded polypropylene particle foam
having a density of approximately 60 kg/m³.

Claim 11. (*Previously Presented*) A hollow surfboard according to claim 10,
wherein:

 said expanded polypropylene particle foam has a compressive stress at 25%
of deformation of approximately 350 kPa measured according to ISO standard 844.

Claim 12. (*Previously Presented*) A hollow surfboard according to claim 9, wherein:
said polypropylene foam comprises an expanded polypropylene particle foam
having a density of approximately 20-100 kg/m³.

Claim 13. (*Previously Presented*) A hollow surfboard according to claim 12,
wherein:

 said expanded polypropylene particle foam has a compressive stress at 25%
of deformation of approximately 100-600 kPa measured according to ISO standard 844.

Claim 14. (*Previously Presented*) A hollow surfboard according to claim 1, wherein:
each of said at least one longitudinal partition extends along at least 70
percent of the length of the inner cavity.

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Claim 15. (Currently Amended) A surfboard comprising:

a deck having a downwardly concave transverse cross section, said deck comprising a foam material, said deck being adapted to support a standing person during use of the surfboard;

a hull connected to said deck to form a subassembly, said hull comprising a foam material;

at least one longitudinally extending partition positioned within said subassembly interposed between said deck and said hull, said partition comprising a polymeric elastic foam material extending along at least a majority of a distance between said deck and said hull, said polymeric elastic foam material having a compressible elasticity or viscoelasticity to provide said deck with an ability to deflect downwardly under pressure exerted by a foot of a user on said deck relative to said hull and to cause said deck to recover from said deflection upon cessation of said pressure exerted by the foot.

Claim 16. (Previously Presented) A surfboard according to claim 15, wherein:

 said foam has a longitudinal side surface exposed to an inner cavity of the board.

Claim 17. (Canceled)

Claim 18. (Previously Presented) A surfboard according to claim 15, wherein:

 said material of said partition is polypropylene foam.

Claim 19. (Previously Presented) A surfboard according to claim 18, wherein:

 said polypropylene foam comprises an expanded polypropylene particle foam.

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Claim 20. (*Previously Presented*) A surfboard according to claim 15, wherein:
said foam material of said deck and said foam material of said hull comprise a
polystyrene foam.

Claim 21. (*Previously Presented*) A surfboard according to claim 20, wherein:
said material of said partition is polypropylene foam.

Claim 22. (*Previously Presented*) A surfboard according to claim 21, wherein:
said polypropylene foam comprises expanded polypropylene particle foam.

Claim 23. (*Previously Presented*) A surfboard according to claim 15, wherein:
said foam material of said deck and said foam material of said hull comprise
an extruded polystyrene foam.

Claim 24. (*Previously Presented*) A surfboard according to claim 23, wherein:
said material of said partition is polypropylene foam.

Claim 25. (*Previously Presented*) A surfboard according to claim 24, wherein:
said polypropylene foam comprises expanded polypropylene particle foam.

Claim 26. (*Previously Presented*) A surfboard according to claim 15, wherein:
said foam material of said deck and said foam material of said hull comprise a
thermoformed extruded polystyrene foam.

Claim 27. (*Previously Presented*) A surfboard according to claim 26, wherein:
said material of said partition is polypropylene foam.

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Claim 28. (*Previously Presented*) A surfboard according to claim 27, wherein:
said polypropylene foam comprises expanded polypropylene particle foam.

Claim 29. (*Previously Presented*) A hollow surfboard according to claim 1, wherein:
said partition does not include a rigid honeycomb structure.

Claim 30. (*Previously Presented*) A surfboard according to claim 15, wherein:
said partition does not include a honeycomb structure.

Claim 31. (*Previously Presented*) A hollow surfboard according to claim 1, wherein:
said foam of said longitudinal partition comprises a material continuous along
a height and along a width of said foam.

Claim 32. (*Currently Amended*) A hollow surfboard according to claim 1, wherein:
said partition has a height and a width;
all of said foam of said longitudinal partition is continuous along the width of
said partition through an entirety of said height a height and along a width of said
longitudinal partition.

Claim 33. (*Currently Amended*) A surfboard according to claim 15, wherein:
said partition has a height and a width;
the foam of said longitudinal partition comprises a material continuous along
a height of said foam the width of said partition through an entirety of said height of said
longitudinal partition.

Claim 34. (*Previously Presented*) A surfboard according to claim 15, wherein:
said longitudinal partition consists essentially of foam.

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Claim 35. (*Currently Amended*) A surfboard according to claim 15, wherein:
all of said foam of said longitudinal partition is continuous along a height and a width of said longitudinally extending partition.

Claim 36. (*Previously Presented*) A hollow surfboard according to claim 1, wherein:
said foam of said partition comprises a material having a compressible elasticity or viscoelasticity to allow said upper half-shell to deflect downwardly, relative to said lower half-shell, under pressure exerted by a foot of a user on said upper half-shell and to cause said upper half-shell to recover upwardly upon cessation of said pressure exerted by the foot.

Claim 37. (*Previously Presented*) A surfboard according to claim 15, wherein:
said hull has no lateral side walls.

Claim 38. (*Previously Presented*) A surfboard according to claim 15, wherein:
said foam material of said deck is a polyurethane foam or a polyetherimide foam.

Claim 39. (*Previously Presented*) A surfboard according to claim 15, wherein:
said foam material of said deck is a polystyrene foam.

Claim 40. (*Currently Amended*) A surfboard according to claim 15 38, wherein:
said foam material of said partition is a polypropylene foam.

Claim 41. (*Currently Amended*) A surfboard according to claim 15 38, wherein:
said foam material of said partition is an expanded polypropylene foam.

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Claim 42. (Previously Presented) A hollow surfboard according to claim 1, wherein:
said upper half-shell further comprises a honeycomb structure in an area of
said upper half-shell adapted to support a user's feet.

Claim 43. (Previously Presented) A surfboard according to claim 15, wherein:
said deck further comprises a honeycomb structure in an area of said deck
adapted to support a user's feet.

Claim 44. (Previously Presented) A hollow surfboard according to claim 1, wherein:
said upper half-shell is not symmetrical with respect to said lower half-shell.

Claim 45. (Previously Presented) A surfboard according to claim 15, wherein:
said deck is not symmetrical with respect to said hull.

Claim 46. (Currently Amended) A surfboard comprising:
a deck adapted to support a standing person during use of the surfboard, said
deck comprising a foam material;
a hull supporting said deck, said hull comprising a foam material, said deck
and said hull enclosing an inner cavity having a length and a width;
at least one longitudinal partition consisting essentially of a foam material;
said partition extending between said deck and said hull along at least a
portion of said length of said inner cavity and at least a majority of a height of said inner
cavity to support said deck relative to said hull, said foam material of said partition allowing
said deck to deflect downwardly relative to said hull under pressure exerted by a foot of a
user on said deck.

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Claim 47. (*Previously Presented*) A surfboard according to claim 46, wherein:
said longitudinal partition extends along at least about 70% of the length of
said inner cavity.

Claim 48. (*Previously Presented*) A surfboard according to claim 46, wherein:
said deck is not symmetrical with respect to said hull.

Claim 49. (*Previously Presented*) A surfboard according to claim 46, wherein:
the board has an initial shape;
said partition comprises a polymeric elastic or viscoelastic compressible foam
material;
said foam material provides said deck with an ability to deflect downwardly
relative to said hull by compressing under pressure exerted by a foot of a user on said
deck;
said foam material further provides said board with an ability to recover said
initial shape upon cessation of said pressure of the foot of the user.

Claim 50. (*Previously Presented*) A surfboard comprising:
a deck adapted to support a standing person during use of the surfboard, said
deck comprising a foam material;
a hull supporting said deck, said hull comprising a foam material, said deck
and said hull enclosing an inner cavity having a length, a width, and a height;
at least one longitudinal partition comprising a structural element to support
said deck relative to said hull, said longitudinal partition comprising a polymeric foam
material extending along substantially the height of said inner cavity from said deck to said

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hull, said foam material being compressible under a force exerted on the deck by the foot of the standing person;

 said longitudinal partition further comprising no additional structural element extending along at least a majority of said height of said inner cavity.

Claim 51. (*Previously Presented*) A surfboard according to claim 50, wherein:

 said longitudinal partition extends along at least about 70% of the length of said inner cavity.

Claim 52. (*Previously Presented*) A surfboard according to claim 50, wherein:

 said deck is not symmetrical with respect to said hull.

Claim 53. (*New*) A hollow surfboard according to claim 1, wherein:

 said upper half-shell is not reinforced with a honeycomb structure.

Claim 54. (*New*) A surfboard according to claim 15, wherein:

 said deck is not reinforced with a honeycomb structure.

Claim 55. (*New*) A hollow surfboard according to claim 1, wherein:

 said longitudinal partition has a height and a thickness, said partition consists essentially of foam along an entirety of said height and thickness with no internal reinforcing structure within said thickness.

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Claim 56. (New) A hollow surfboard according to claim 1, wherein:

 said at least one longitudinal partition comprises a plurality of longitudinal partitions made of foam, each of opposite sides of said partitions comprising foam exposed to an inner cavity of the surfboard.

Claim 57. (New) A hollow surfboard according to claim 1, wherein:

 said at least one longitudinal partition comprises a most rigid partition of the surfboard, said most rigid partition is said longitudinal partition consisting essentially of foam.

Claim 58. (New) A hollow surfboard according to claim 57, wherein:

 the most rigid partition consists essentially of an elastic foam.

Claim 59. (New) A hollow surfboard according to claim 1, wherein:

 said at least one longitudinal partition comprises at least two longitudinal partitions dividing an interior of the hollow surfboard into at least three cavities, both of said two longitudinal partitions consisting essentially of foam.

Claim 60. (New) A hollow surfboard according to claim 1, wherein:

 said sheet of foam comprises foam continuous along a length and a width of said sheet.

Claim 61. (New) A surfboard according to claim 15, wherein:

 said foam material of said deck comprises a sheet of foam continuous along a length and a width of said sheet.

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Claim 62. (New) A surfboard according to claim 46, wherein:

said foam material of said deck comprises a sheet of foam continuous along a length and a width of said sheet.

Claim 63. (New) A surfboard according to claim 50, wherein:

said foam material of said deck comprises a sheet of foam continuous along a length and a width of said sheet.

Claim 64. (New) An aquatic gliding board comprising:

a hollow inner shell;
an outer shell;
a casing between said inner shell and said outer shell, said casing comprising at least one layer of a thermoformed extruded polystyrene foam;
at least one longitudinally extending partition within said hollow inner shell, said partition being made of a material different from said thermoformed extruded polystyrene foam of said casing.

Claim 65. (New) An aquatic gliding board according to claim 64, wherein:

said at least one longitudinally extending partition comprises a plurality of transversely spaced apart longitudinally extending partitions.

Claim 66. (New) An aquatic gliding board according to claim 64, wherein:

said partition is made of wood.

Claim 67. (New) An aquatic gliding board according to claim 64, wherein:

said partition is made of foam.